

(19) World Intellectual Property
Organization
International Bureau



23 JUL 2004

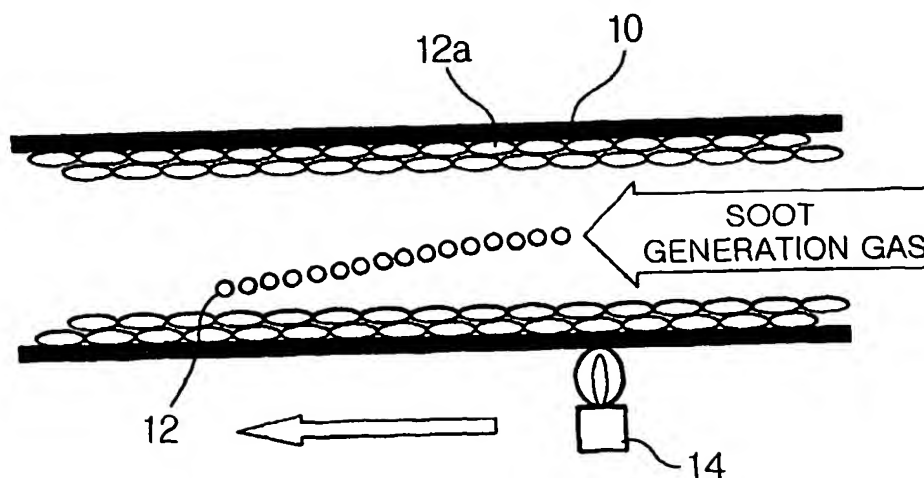
(43) International Publication Date
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number
WO 2004/018374 A1

- (51) International Patent Classification⁷: **C03B 37/018** (74) Agents: LEE, Sang-Yong et al.; 4F, Byukcheon Bldg., 1597-5, Seocho-dong, Seocho-gu, Seoul 137-876 (KR).
- (21) International Application Number:
PCT/KR2003/001678 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (22) International Filing Date: 20 August 2003 (20.08.2003)
- (25) Filing Language: Korean
- (26) Publication Language: English
- (30) Priority Data:
10-2002-0049108 20 August 2002 (20.08.2002) KR
- (71) Applicant (*for all designated States except US*): LG CABLE LTD. [KR/KR]; 19-20F ASEM Tower 159 Samsung-dong, Gangnam-gu, Seoul 135-090 (KR).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): JANG, Ki-Wan [KR/KR]; 91-137 Sadang-dong, Dongjak-gu, Seoul 156-090 (KR). PARK, Lae-Hyuk [KR/KR]; 1-510 Samsung Apt., Singil-dong, Yeongdeungpo-gu, Seoul 150-778 (KR). LEE, Chan-Joo [KR/KR]; 383-97 Yeonnam-dong, Mapo-gu, Seoul 121-867 (KR).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: METHOD OF MANUFACTURING OPTICAL FIBER PREFORM USING MODIFIED CHEMICAL VAPOR DEPOSITION INCLUDING DEHYDRATION AND DECHLORINATION PROCESS AND OPTICAL FIBER MANUFACTURED BY THE METHOD



(57) Abstract: Disclosed is a method of manufacturing an optical fiber preform using MCVD including dehydration and dechlorination, which executes the following process repeatedly with changing the composition of soot generation gas according to the refractive index profile, the process including the steps of: forming a soot layer having pores on an inner wall of a deposition tube at a temperature lower than the soot sintering temperature with putting soot generation gas and oxygen gas into the rotating deposition tube; removing hydroxyl groups with keeping the pores by putting dehydration gas into the deposition tube; removing chlorine impurities existing in the soot layer with keeping the pores by putting dehydration gas into the deposition tube; and sintering the soot layer by heating the deposition tube at a temperature over the soot sintering temperature.